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with. But chronological arrangement defies all other arrangement.

I had hoped that the preceding account would have met Mr. Taylor's eye in print: but he died during the last summer. For a man of a very thoughtful and quiet temperament, he had a curious turn for vexed questions. But he reflected very long and very patiently before he published: and all his works are valuable for their accurate learning, whichever side the reader may take.

HOME AND FOREIGN INTELLIGENCE.

THE SCOTTISH WIDOWS' FUND LIFE ASSURANCE SOCIETY.

Founded A.D. 1815.

SEVENTH DIVISION OF PROFITS.

REPORT BY THE MANAGER ON THE INVESTIGATION OF THE SOCIETY'S
AFFAIRS, MADE AS AT 31ST DECEMBER 1866.

THE operations of the seven years ending 31st December last have been marked by several important features which it seems desirable to bring to the recollection of the Court of Directors, at the outset of the present Report.

Change of Laws.

The Court is aware that the Society was originally constituted on the basis of the Northampton Table of Mortality and on the assumption of an improvement of money at the rate of 4 per cent. At each periodical ascertainment of Surplus it was required that there should be reserved from division at least one-third of the Surplus, and also that, from the remaining two-thirds, there should be set aside a sum equal to the value of the Intermediate Bonus, payable on such Policies as should become Claims before the next period of Division. The six Investigations, prior to the present, were made according to these Rules. To persons not intimately acquainted with the subject, the reserve of the large sums referred to, out of what the system represented to be actual Surplus, naturally suggested the belief that there was a tendency in the original constitution to the accumulation of undivided profit, in which the Members whose payments had created it might never participate. On the other hand, it was shown, by *approximate* Valuations made in 1852 and 1859 according to the Carlisle Table of Mortality, and 3 per cent interest, that the tendency really was in the opposite direction. The probabilities deduced from the Assumed Mortality of the Northampton Table were evidently so wide of the truth, and the whole results brought out by the use of them (even with the compensatory reserves referred to) were seen to be so doubtful and misleading, that it had become absolutely necessary to abandon the original basis of Valuation, and to adopt another and more reliable one in its stead. The new basis of the Carlisle 3 per cent Table was, in the end of 1864, finally adopted.

The present Investigation has therefore been made, for the first time in the history of the Society, according to these new and approved data of Valuation, in the exact and detailed manner to be afterwards explained,

Increase of Business.

A remarkable increase in the Business of the Society has taken place during the course of the Septennial period now to be reported upon. The New Assurances effected in each of the seven years, and the new Premiums payable thereon, have been as in the following

VIDIMUS OF NEW BUSINESS TRANSACTED.

| Year of Issue. | Policies issued. | Amount Assured. | First Premiums thereon. |
|------------------|------------------|-----------------------|-------------------------|
| During Year 1860 | 600 | £380,305 0 0 | £12,530 6 1 |
| Do. Year 1861 | 603 | 374,599 0 0 | 13,438 5 2 |
| Do. Year 1862 | 981 | 666,834 18 5 | 23,251 18 5 |
| Do. Year 1863 | 1169 | 882,485 13 3 | 30,006 0 7 |
| Do. Year 1864 | 1263 | 876,349 13 6 | 30,128 17 4 |
| Do. Year 1865 | 1603 | 1,045,497 13 0 | 35,106 17 9 |
| Do. Year 1866 | 1893 | 1,235,812 9 7 | 40,934 5 4 |
| Total. | 8112 | £5,461,864 7 9 | £185,396 10 8 |

These figures do not represent any business re-assured with other Offices.

Interest realised.

| | | | | |
|---|----|----|----|-----------|
| In 1860 the Average Rate of Interest realised was | £4 | 1 | 3 | per cent. |
| In 1861 | 4 | 2 | 5 | „ |
| In 1862 | 4 | 3 | 0 | „ |
| In 1863 | 4 | 2 | 10 | „ |
| In 1864 | 4 | 4 | 3 | „ |
| In 1865 | 4 | 7 | 0 | „ |
| In 1866 | 4 | 10 | 6 | „ |

The average rate prior to the commencement of this Septennium was about 4 per cent.

High rates of Interest have prevailed of late years upon the best securities, and new channels of Investment, well adapted for the purposes of the Society, have been opened up, such as Rent-charges on landed estates, and Rates leviable by Statute from real property in Towns and Rural Parishes.

Expenses of Management.

The whole Expenses of Management at the Head Office and Agencies, which include Commission and charges of every kind, have, during the seven years, been $6\frac{1}{4}$ per cent of the Revenue. During the Septennium a large part of the old Business, on which little or no commission was payable, has lapsed by death of the lives assured, and this having been replaced by large introductions of New Assurances from Agencies, the *ratio* of expenditure in this respect has, of course, considerably increased, as shown by the fact that the rate of the whole expenses during the previous Septennium was only $4\frac{1}{4}$ per cent of the revenue.

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It is important to observe however that, viewing the total expenses of management in relation to the New Business annually introduced to the Society, the *ratio* which the total expenditure bears to the first Premiums of New Assurances issued is, at the close of the Septennium, only one-half what it was at its commencement.

Increase of Society's Resources.

The Funds and Revenue of the Society have increased during the Seven years as in the following Abstract.

| | Funds. | | | Annual Revenue. | | |
|---|------------|----|----|-----------------|----|----|
| 1860. January 1, commencement of Septennium | £3,518,230 | 6 | 9 | £412,767 | 9 | 2 |
| 1860. December 31, end of 1st year | 3,601,763 | 14 | 7 | 426,653 | 5 | 1 |
| 1861. " end of 2d year | 3,720,200 | 4 | 5 | 442,438 | 0 | 6 |
| 1862. " end of 3d year | 3,849,127 | 8 | 1 | 458,691 | 12 | 1 |
| 1863. " end of 4th year | 3,975,325 | 17 | 10 | 479,791 | 10 | 2 |
| 1864. " end of 5th year | 4,086,824 | 17 | 0 | 505,424 | 10 | 7 |
| 1865. " end of 6th year | 4,230,405 | 4 | 11 | 537,568 | 4 | 10 |
| 1866. Close of Septennium | 4,371,995 | 0 | 1 | 589,440 | 9 | 8 |

| | Funds. | | | Annual Revenue. | | |
|---------------------------------|----------|----|---|-----------------|---|---|
| Increase during the Seven Years | £853,764 | 13 | 4 | £176,673 | 0 | 6 |

Mortality Experience.

Comparing the actual mortality results with the expectation according to the Carlisle Table, the facts, both with reference to the number of deaths and amount of claims, are shown as follow:—

| Year. | Deaths. | Expectation. | Claims. | Expectation. |
|------------------|---------|--------------|------------|--------------|
| During Year 1860 | 176 | 183 | £277,901 | £265,939 |
| " 1861 | 157 | 189 | 265,605 | 271,858 |
| " 1862 | 172 | 197 | 279,235 | 284,246 |
| " 1863 | 206 | 208 | 296,427 | 295,574 |
| " 1864 | 230 | 217 | 328,419 | 311,376 |
| " 1865 | 212 | 231 | 331,363 | 326,583 |
| " 1866 | 245 | 245 | 386,511 | 346,544 |
| Total. | 1398 | 1470 | £2,165,461 | £2,102,120 |

Of this amount, (£2,165,461,) £591,538 were Bonus Additions, being £38½ per cent of the original sums assured under Policies entitled to Bonus.

It appears that, while the number of deaths during the Septennium has been within the limits of the Carlisle Expectations, the amount of Claims payable in consequence thereof has exceeded the expectations. A similar disparity of result is becoming more or less prominent in the experience of Life Assurance Institutions generally, and appears to arise from the method of dividing the Surplus, not in present cash, but by granting what are equivalent to New Assurances in the form of Reversionary Bonus Additions, which, as the Court are aware, are declared upon the Policies without any

reference to the continued health and assurable condition of the Members at the time. This mode of dividing Surplus has obtained large acceptance, and is very generally adopted by Life Assurance Companies.

Ascertainment of Surplus.

Every Policy and Obligation by the Society in existence at 31st December has been made the subject of separate and independent Valuation. These Valuations have been checked at different times by different computers, and the entire Investigation has been tested by another and altogether different method of Valuation, and found to agree therewith, so that perfect reliance may be placed upon the accuracy of the results. It is scarcely necessary to add that the additions to the nett or pure Premiums, technically termed "Loading," have been carefully separated and wholly set aside in valuing the future Premiums. By assuming nett Premiums alone as an Asset, the possibility of anticipating future profits to any extent whatever has been effectually excluded, and all sources of future surplus are thereby preserved intact.

It will be remembered that approximate valuations made at the end of last Septennium showed that the undivided Surplus composed of the Guarantee Fund and other Reserves, amounting to £454,000, as brought out by the Northampton system was to the extent at least of three-fifths of its amount illusory.

It began early in the course of the present Investigation to become manifest that the approximate Valuations of 1852 and 1859 had not fully disclosed the misleading character of the Northampton figures; and when the whole Calculations were brought to a close, it was found that if there was any Balance at all of Realised Profits remaining undivided among the Members at 1859, it could only have been of small amount, probably not more than a few thousand pounds; and that the supposed Surplus of undivided Profit at that time was not only to the extent of three-fifths, but nearly altogether, without existence, and therefore that whatever Surplus arises under the present Investigation must have been realised almost entirely during the seven years since 1st January 1860.

| | | | |
|--|----------|----|----|
| * * * * * | | | |
| The total Surplus of the Septennium is . . . | £834,183 | 10 | 1 |
| Whereof there has been paid to the Representatives of Members who died during the seven years | 118,395 | 13 | 2 |
| Leaving | £715,787 | 16 | 11 |

now to be apportioned among the Members in terms of the Laws.

Comparative amount of Surplus.

| | Premiums Paid. | Cash Surplus Divided. | Percentage of Surplus on Premiums Paid. |
|----------------------------|----------------|--------------------------|--|
| Septennium ending 1852 . . | £1,442,446 | £525,055 | 36.100 per cent. |
| Do. 1859 . . | 1,778,187 | 647,512 | 36.111 per cent. |
| Do. 1866 . . | 2,176,716 | 834,183 | 38.323 per cent. |

Thus a larger percentage of Premiums is returnable in the form of Additions to the Policies on this occasion than on any previous one.

Second Comparative View.—At 1859 the rate of Reversionary Bonus declared (£1 : 12 : 6 per cent per annum on original sums assured and previous Bonuses) yielded, upon the whole, the largest Reversionary Bonus which had been declared by the Society up to that date. Were the Surplus which has arisen during this last Septennium distributed among the Members in precisely the same way, it would yield the higher rate of £1 : 13s. per cent, but of course upon the still further accumulated amount. This would yield on Policies of from one to seven years' standing a slightly larger Bonus than Policies of like standing received at 1859, and on all Policies issued prior to the year 1854, a larger amount of Bonus by sums varying from £15 to £30 per £1000 assured.

The above rate of £1 : 13s. per cent is equivalent to Reversionary Bonuses on the Premiums paid during the seven years varying from 50 per cent on the youngest Policies, to 140 per cent on the oldest Policies, the average of the whole being £63 per cent.

Division of Surplus among the Policyholders.

Under the new Law of Division which comes into force for the first time at the present Septennial Investigation, the Balance of Surplus, £715,787 : 16 : 11, is now divisible among the Members—partly in the form of Bonus, and partly as a rateable proportion of Guarantee Fund retained at the credit of each Policy in the form of a cash deposit, bearing Interest at 3 per cent from 31st December 1866, and payable in the event of death occurring before another Division.

In order to give effect to this double form of Addition to the Policies, the Extraordinary Court of Directors are required to divide the Surplus into Bonus Fund and Guarantee Fund, and to fix the latter at not less than £5 per cent of the value of the Total Liabilities at the time. There being no grounds on which more than £5 per cent could be considered proper in fixing the amount of the Guarantee Fund, the following will be the Division of the Surplus:—

| | | |
|---|----------|-------|
| 1. Amount carried to GUARANTEE FUND, being £5 per cent on the value of the Society's whole Liabilities (£207,893 : 17 : 2), which, with an unappropriated sum of £10,459, 4s. 9d. amounts to £218,353 | 1 | 11 |
| 2. Amount carried to BONUS FUND for Remainder of Surplus Fund | 497,434 | 15 0 |
| Total | £715,787 | 16 11 |

It has already been stated that if the entire balance of the Surplus Fund, amounting to £715,787 : 16 : 11, were divided in the form of Bonus, it would yield Reversionary Additions at the rate of £1 : 13s. per cent per annum in the compound form. It follows, therefore, that the two additions now to be made to the Policies, under the different names of "Portion of Guarantee Fund" and Bonus, are together the equivalent of that rate of Bonus. That is to say—

| | |
|---|-----------------------|
| The portion of Guarantee Fund to (£715,787 : 16 : 11 : | |
| £218,353 : 1 : 11 :: £1 : 13 : 0) | =£0 10 0 p. ct. |
| The Bonus to (£715,787 : 16 : 11 : £497,434 : 15 : 0 :: | |
| £1 : 13 : 0) | =£1 3 0 p. ct. |
| Together | <u>£1 13 0 p. ct.</u> |

The Bonus of £1 : 3s per cent will be calculated as on previous occasions in the compound form upon the Original Sum Assured and all former Bonus Additions in existence at 31st December 1866. The effect of that rate of Bonus as an Addition to the Policies is shown in the Table (below).

The Portion of Guarantee Fund will be calculated as a Cash Addition (yielding Interest at 3 per cent from 31st December 1866) also in the compound form, viz.—on the Total Cash Values not only of the Original Sums Assured and Additions at that date, but also on the value of the Bonus of £1 : 3s. per cent now declared.

The amount of Guarantee Fund added to every Policy cannot be conveniently shown in a Table, because it depends upon the age of the lives assured at the date of Valuation, as well as upon the duration of the Policy at that time; the general effect of the division of the Fund among the Members is shown in the Table at the end—the examples being based on the assumption of the lives assured having been 35 years of age at entry. The portion of Guarantee Fund to be added to the Policies will, of course, be greater or less than the sums stated in the Table, according as the age at the time of entry was above or below 35.

There was also declared a Contingent Prospective Bonus on Policies which have become Claims subsequent to 31st December 1866, or may do so on or before 31st December 1873, either by death of the Lives Assured, or by the occurrence of the events on which the sums assured become payable, at a rate one-quarter or 5s. per cent per annum less than the rate of vested Reversionary Bonus above mentioned, on the original amount assured and previous vested Bonuses, including that now declared, remaining in existence at date of claim.

And the said whole Additions are made in the same manner to Policies obtained by single payments, or other mode of contribution different from Annual Payments.

Balance-Sheet of the Scottish Widows' Fund and Life Assurance Society

AS AT 31ST DECEMBER 1866.

LIABILITIES.

I. DEBTS DUE BY THE SOCIETY—

| | |
|--|----------------------|
| 1. Claims by Death of Lives Assured, not yet payable | £219,458 16 9 |
| 2. Arrears of Annuities unclaimed | 352 8 11 |
| 3. Commission due to Agents on Premiums in course of collection, Tradesmen's and all other outstanding Accounts at 31st December | 8,166 5 8 |
| Carried forward | <u>£227,977 11 4</u> |

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Brought forward £227,977 11 4

II. VALUE OF THE SOCIETY'S LIABILITIES UNDER ASSURANCE
AND ANNUITY POLICIES, per Abstract of Valuations—

| | Value of Sums Assured and Bonus Additions. | | | Value of Future Nett Premiums. | | | Difference, being Nett Liability. | | |
|------------------------------------|---|----|----|--------------------------------------|----|----|---|----|----|
| | £ | s. | d. | £ | s. | d. | £ | s. | d. |
| 1.—Assurances. | | | | | | | | | |
| Policies with participation . . . | 7,482,134 | 19 | 3 | 3,954,204 | 11 | 0 | 3,527,930 | 8 | 3 |
| Policies without participation . . | 204,818 | 9 | 6 | 154,905 | 4 | 11 | 49,823 | 4 | 7 |
| | 7,686,953 | 8 | 9 | 4,109,199 | 15 | 11 | 3,587,753 | 12 | 10 |
| Deduct Re-assurances . . . | 27,520 | 0 | 4 | 23,691 | 9 | 9 | 3,829 | 10 | 7 |
| 2.—Annuities. | | | | | | | | | |
| Policies with participation . . . | 7,669,433 | 8 | 5 | 4,085,508 | 6 | 2 | 3,583,925 | 2 | 3 |
| Policies without participation . . | 956 | 4 | 0 | 135 | 0 | 3 | 821 | 3 | 5 |
| | 73,613 | 4 | 9 | 2,132 | 7 | 7 | 71,460 | 17 | 2 |
| | 7,744,002 | 17 | 2 | 4,087,795 | 14 | 0 | 3,656,207 | 3 | 2 |

3,656,207 3 2

Total Liabilities £3,884,184 14 6

NOTE.—The gross Annual Premiums payable amount to £376,386: 12: 2,
of which £79,547: 0: 11 per annum is "Loading." The difference
of £296,839: 11: 3 per annum only is contained in the above
valuation.

BALANCE—

Being Amount remaining at Credit of the Profit and Loss Account £715,787 16 11

£4,599,972 11 5

ASSETS.

| | | | |
|--|------------|----|----|
| Landed Securities | £2,992,985 | 19 | 11 |
| Railway Debentures | 398,826 | 15 | 8 |
| Redeemable Annuities and Reversions secured over Land and Life Policies | 381,410 | 19 | 11 |
| Loans to Members of Society on Policies of greater Value . . . | 530,175 | 10 | 11 |
| Government Annuities on Lives of Nominees | 21,333 | 5 | 0 |
| Government Terminable Annuities | 25,098 | 8 | 1 |
| House Property and Ground Rents | 24,831 | 13 | 7 |
| Office Furniture, from which 10 per cent per ann. has been deducted for depreciation | 1,388 | 7 | 4 |
| Miscellaneous Sums due to the Society— | | | |
| Balances due by Agents | £105,740 | 5 | 11 |
| Renewal Premiums, etc., at Head Office, on which the 30 days of grace had not expired | 28,604 | 6 | 2 |
| | £134,344 | 12 | 1 |
| Proportion of Interest on Investments from last payment, less Income-Tax | 42,650 | 17 | 11 |
| Cash in Bank | 46,697 | 4 | 3 |
| Cash in Office | 228 | 16 | 9 |

223,921 11 0

The Nett Fund of the Society as at 31st December is
Assets as below £4,599,972 11 5
Less debts per Contra 227,977 11 4

NETT FUND . £4,371,995 0 1

£4,599,972 11 5

Valuation of the Policies.

| Description of Transactions. | Original Sums Assured and Bonus Additions at 31st December 1866. | Gross Annual Premiums payable after giving effect to all Reductions and Redemptions. | Nett Annual Pre- miums. | Nett Value of Liabili- ties. |
|---|---|---|----------------------------------|---------------------------------------|
| I. Assurances. | Col. 1. | Col. 2. | Col. 3. | Col. 12. |
| 1. WITH PARTICIPATION. | £ s. d. | £ s. d. | £ | £ |
| Whole Life Policies | 12,977,747 3 6 | 355,330 7 1 | 278,941 | 3,495,169 |
| Do. definite number of Premiums | 82,742 18 1 | 4,908 3 10 | 3,757 | 15,647 |
| Do. do. decreasing Premiums | 1,000 0 0 | 90 10 0 | 65 | 331 |
| Do. Premiums decreasing septennially | 500 0 0 | 30 3 9 | 24 | 13 |
| Do. Premiums increasing quinquennially | 19,900 0 0 | 579 7 7 | 411 | 318 |
| Do. Premiums increasing septennially | 2,250 0 0 | 43 10 5 | 28 | 10 |
| Survivorship Policies | 500 0 0 | 12 19 7 | 9 | 26 |
| Endowment Assurance Policies | 34,375 0 0 | 1,922 4 11 | 1,483 | 1,493 |
| Policies on the Longest Liver | 38,854 14 3 | 407 6 1 | 355 | 21,863 |
| Joint Life Policies | 26,978 10 3 | 1,342 14 1 | 1,003 | 3,051 |
| Joint Life Endowment Policies | 250 0 0 | 12 13 2 | 9 | 9 |
| 1. Assurances with Profits | 13,185,098 6 1 | 364,680 0 6 | 286,085 | 3,537,930 |
| 2. WITHOUT PARTICIPATION. | | | | |
| Whole Life Policies | 289,752 11 4 | 9,413 0 6 | 8,635 | 34,827 |
| Do. definite number of Premiums | 500 0 0 | 56 10 0 | 52 | 252 |
| Do. Premiums increasing quinquennially | 12,400 0 0 | 319 1 0 | 290 | 224 |
| Do. Premiums increasing septennially | 10,499 0 0 | 342 10 1 | 311 | 118 |
| Survivorship Policies | 12,165 0 0 | 190 16 6 | 160 | 154 |
| Endowment Assurance Policies | 36,400 0 0 | 2,082 13 3 | 1,995 | 9,430 |
| Policies on the Longest Liver | 14,299 18 0 | 360 15 6 | 315 | 4,528 |
| Joint Life Policies | 700 0 0 | 41 18 0 | 38 | 32 |
| Endowment Policy | 100 0 0 | .. | .. | 65 |
| Short Term Policies | 23,720 0 0 | 386 17 4 | 297 | 193 |
| 2. Assurances without Profits | 400,536 9 4 | 13,194 2 2 | 12,093 | 49,823 |
| Total Assurances | 13,585,634 15 5 | 377,874 2 8 | 298,178 | 3,587,753 |
| Deduct Re-Assurances | 58,631 10 0 | 1,828 6 8 | 1,615 | 3,828 |
| Nett Amount of Assurances | 13,527,003 5 5 | 376,045 16 0 | 296,563 | 3,583,925 |
| II. Annuities. | | | | |
| Present and Contingent (<i>Int. 3½ p. cent</i>) | 9,801 7 1 | 340 16 2 | 276 | 72,282 |
| Total of the Results | | 376,386 12 2 | 296,839 | 3,656,207 |

The extent of the original table as issued by the Society has rendered considerable abridgment necessary; but in further illustration of the mode of valuation we extract the following:—

Whole Life Policies (With Participation).

| | £ |
|--|-----------|
| Column 3. Nett Annual Premiums | 278,941 |
| „ 4. Proportion of Nett Premiums contained in Col. 3 to next Renewal | 186,112 |
| „ 5. Annual Loading on Nett Premiums in Col. 3 | 76,390 |
| „ 6. Loading on Single Premiums and parts of Premiums redeemed | 772 |
| „ 7. Proportion of Loading in Col. 6 to next Renewal | 511 |
| „ 8. Value of Sums Assured and Bonuses ($S \times A_m$) | 7,368,525 |
| „ 9. Value of paid-up Loading in Col. 6 $L(a_m' + 1)$ - "Proportion" thereof in Col. 7 | 8,887 |
| „ 10. Total Value of Liabilities in Cols. 8 and 9 | 7,377,412 |
| „ 11. Value of Nett Premiums in Col. 3. $p_m(a_m' + 1)$ - "Proportion" thereof in Col. 4 | 3,882,243 |
| „ 12. Nett Value of Liabilities, being excess of Col. 10 over Col. 11. | 3,495,169 |
| „ 13. New Bonus at £1. 3s per cent per annum on Sums Assured and Bonus Additions | 835,966 |
| „ 14. Value of New Bonus in Col. 13 | 493,082 |
| „ 15. Total Value of Policy and Bonuses to 31st December, 1866, being Cols. 12 and 14 | 3,988,251 |
| „ 16. Portion of Guarantee Fund being £5 per cent on Col. 15 | 199,413 |

Notation.— S =Sums Assured; A =Value of £1 payable at Death; a =Value of £1 annually; m =Age at Entry; m' =Age at Date of Valuation; L =Loading; p =Nett Premium.

DISTRIBUTION OF THE SURPLUS.

| | | | |
|--|----------|----|----|
| At credit of the Profit and Loss Account | £715,787 | 16 | 11 |
| Less unappropriated Balance | 10,459 | 4 | 9 |
| New Bonus | £497,434 | 15 | 0 |
| Portion of Guarantee Fund | 207,893 | 17 | 2 |
| | £705,328 | 12 | 2 |

TABLE
SHOWING the ACCUMULATED AMOUNT of POLICIES of £1000.

| Year of Entry. | Policy with Vested Additions at 31st Dec. 1866. | Sums Assured and Bonus Additions (exclusive of Guarantee Fund and Interest) payable if Death occur after Payment of the Premium due in the Year. | | |
|------------------------|---|--|-----------|-----------|
| | | 1867. | 1870. | 1873. |
| | £ s. d. | £ s. d. | £ s. d. | £ s. d. |
| 1816 } to 1819 } | 2444 3 4 | 2466 3 3 | 2532 3 1 | 2598 3 0 |
| 1820 | 2071 10 6 | 2090 3 5 | 2146 2 0 | 2202 0 8 |
| 1830 | 1808 3 8 | 1824 9 2 | 1873 5 7 | 1922 2 1 |
| 1840 | 1512 17 5 | 1526 9 9 | 1567 6 9 | 1608 3 8 |
| 1850 | 1266 11 7 | 1277 19 7 | 1312 3 6 | 1346 7 5 |
| 1860 | 1080 10 0 | 1090 4 6 | 1119 7 11 | 1148 11 4 |
| 1866 | 1011 10 0 | 1020 12 1 | 1047 18 3 | 1075 4 5 |

Additions to Policies effected in the Years 1862 to 1866 are not payable if Death occur within Five Years from their respective dates.

EXAMPLES of the PORTION of GUARANTEE FUND, exclusive of Interest thereon, attaching to Policies of £1000, assuming the age at entry to be 35.

| Year of Entry. | Portion of Guarantee Fund. | Year of Entry. | Portion of Guarantee Fund. |
|----------------|----------------------------|----------------|----------------------------|
| | £ s. d. | | £ s. d. |
| 1816 | 103 6 11 | 1850 | 20 4 5 |
| 1820 | 83 6 7 | 1860 | 6 11 6 |
| 1830 | 62 15 3 | 1866 | 0 17 6 |
| 1840 | 39 10 9 | | |

At each Septennial Division of Profits which the Life assured may survive, the "Portion of Guarantee Fund" will be increased in exact proportion to the then increased value of the Policy—such increased sum to be paid at death, with interest thereon at £3 per cent per annum. On the other hand, if either the Sum Assured or Bonuses be surrendered or reduced, the "Portion of Guarantee Fund" and Interest thereon payable at death will be correspondingly diminished.

Mortality Table for the Seven Years 1860 to 1866 both inclusive.

| Age. | Sum of the annual numbers of lives at risk in each of the seven years. | Number of Deaths. | Percentage of Deaths on the number at risk. |
|----------|--|-------------------|---|
| Under 25 | 2684.166 | 13 | .4843 |
| 26 to 30 | 5395.166 | 33 | .6117 |
| 31 „ 35 | 7568.916 | 53 | .7002 |
| 36 „ 40 | 9382.250 | 88 | .9379 |
| 41 „ 45 | 10326.416 | 108 | 1.0458 |
| 46 „ 50 | 10368.000 | 145 | 1.3985 |
| 51 „ 55 | 9450.250 | 161 | 1.7036 |
| 56 „ 60 | 7352.750 | 189 | 2.5704 |
| 61 „ 65 | 5136.500 | 178 | 3.4654 |
| 66 „ 70 | 3126.416 | 156 | 4.9897 |
| 71 „ 75 | 1742.583 | 117 | 6.7142 |
| 76 „ 80 | 922.833 | 94 | 10.1860 |
| 81 „ 85 | 300.500 | 48 | 15.9733 |
| 86 „ 90 | 58.000 | 15 | 25.8620 |
| | | 1,398 | 1.8938 |

Average mean Age at Death 58.0844.

Calculated Number of Lives at Risk.

| | | | | |
|-------|---|---|---|------------------|
| 1860 | . | . | . | 9,301 |
| 1861 | . | . | . | 9,508 |
| 1862 | . | . | . | 9,759.5 |
| 1863 | . | . | . | 10,324.5 |
| 1864 | . | . | . | 10,802.5 |
| 1865 | . | . | . | 11,522.5 |
| 1866 | . | . | . | 12,596.75 |
| Total | . | . | . | <u>73,814.75</u> |

THE LONDON LIFE ASSOCIATION.

*Established 1806.*REPORT OF THE DIRECTORS TO THE GENERAL COURT, HELD ON THE
26TH JULY, 1865.

When, nearly ten years ago, the Court of Directors proposed to the General Court to close the First Series of Members and commence a Second Series, to be entitled after seven years to a reduction of premium less by 10 per cent. than the First Series, the Directors looked forward to a period when the rate of reduction should have increased so much that it would be to the interest of existing Members to close the Second Series, and to begin a Third.

The time, then uncertain, has now arrived, when, in the opinion of the Directors, the Second Series should be closed,—the reduction to which they are entitled being, for this year, 75 per cent.

During the interval, the prosperity of the Association has been uninterrupted,—the data forming the basis of the Tables from which the Society's calculations are made have been more than realized. It is well known that these data consist of a rate of interest of £4 per cent., and a rate of mortality derived by combining the mortality experienced by the Equitable Assurance Society during 67 years with that of the Government Male Annuitants. More than £4 per cent. on the amount of the Society's funds, invested and uninvested, has constantly been obtained after deduction of Income Tax, and the mortality of the Members has been nearly one-fourth short of that which, from the before-mentioned Table, it was estimated that the Society would experience.

The Directors feel justified in looking forward to a continuance of this state of prosperity. The probability of a realization of an average interest of £4 per cent. appears to the Directors to be at least as great as heretofore, and the probability of a continuation of the low rate of mortality may be inferred from the fact that during the last 35 years the rate has been very nearly the same as during the last ten years. In the longer period, the actual claims by death were only $78\frac{3}{4}$ per cent. of the estimated claims; and in the shorter period, from 1855, only $77\frac{3}{4}$ per cent.

Under these circumstances, the Directors are of opinion that the time has come when new Members should be admitted on new terms; and as the Society's premiums are calculated on the assumption of a reduction of 60 per cent. after seven years, the Directors recommend to the General Court to commence a Third Series, to be entitled to a reduction 15 per cent. less than the Second Series.

If this be done, it seems reasonable to expect that the *actual* reduction which new Members will have after *seven years*, will be about *two-thirds* of their premiums.

Anticipating that this recommendation will meet with the concurrence of the General Court, the Court of Directors beg further to report that all proposals for assurance made since the 30th June last have been received, subject to the regulations which the General Court shall adopt in respect of the reduction of premium.

In explanation of the above we give the following from the prospectus of the Association.

The Members* are entitled to a reduction of premium after seven years from the date of assurance.

The *rate* of reduction is determined every year by a valuation of the affairs of the Society, and being therefore liable to annual fluctuation, the amount of reduced premium payable may be more or less from year to year.

On policies effected before 1856 the rate of reduction has been as follows:—

| | |
|--------------------------|--------------------------|
| 60 per cent. in 1840. | 70 per cent. in 1854. |
| 62 $\frac{1}{2}$ " 1841. | 70 " 1855. |
| 65 " 1842. | 74 " 1856. |
| 65 " 1843. | 80 " 1857. |
| 64 " 1844. | 81 " 1858. |
| 64 " 1845. | 82 " 1859. |
| 65 " 1846. | 82 $\frac{1}{2}$ " 1860. |
| 66 " 1847. | 83 $\frac{1}{2}$ " 1861. |
| 66 " 1848. | 83 $\frac{1}{2}$ " 1862. |
| 67 " 1849. | 84 " 1863. |
| 68 " 1850. | 84 $\frac{1}{2}$ " 1864. |
| 69 " 1851. | 85 " 1865. |
| 70 " 1852. | 86 " 1866. |
| 70 " 1853. | 87 " 1867. |

In 1825, 1830, and 1844, it was found necessary, for the protection of the interests of the older Members, to increase the rate of premium payable on new assurances; and, with the same object, in January, 1856, a *Second Series* was formed, to the Members of which the rate of reduction will always be 10 per cent. less than to those who had joined the Association before that date.

Again, on 1st July, 1865, a *Third Series* was commenced, to become entitled to a rate of reduction always 15 per cent. less than the rate to which the *Second Series* will be entitled.

A GENERAL STATEMENT of the Affairs of the **LONDON LIFE ASSOCIATION**, estimated on 30th April, 1865, as up to the 30th June, 1865.

| | £ | s. | d. |
|---|-------------|----|----|
| The present value of £4,210,313 assured on the lives of Members, 1st series | 2,477,969 | 0 | 0 |
| The present value of £2,614,490 assured on the lives of Members, 2nd series | 1,042,521 | 0 | 0 |
| The present value of £217,990 assured on lives not as Members | 107,473 | 0 | 0 |
| Reserve for salaries, fees, and current expenses payable before 1st July, 1865 | 2,000 | 0 | 0 |
| Claims ascertained but not yet paid | 59,250 | 0 | 0 |
| Reserve for claims which may have accrued, and have not been ascertained, and for claims which may accrue before the 1st July, 1865 | 35,994 | 0 | 0 |
| | £ 3,725,207 | 0 | 0 |

* Members are those who assure their own lives at the rates of Premium in Table I.

| | £ | £ | s. | d. |
|--|-----------|-----------|----|----|
| £70,000 3 per cent. Consols valued at | 60,812 | | | |
| 120,000 New 3 per cents. | 103,800 | | | |
| 10,000 Bank Stock | 22,575 | | | |
| 111,500 Liverpool Corporation bonds | 111,500 | | | |
| Advanced on Mortgage and Policies | 2,525,405 | | | |
| House, furniture, fixtures, &c., in King William Street | 14,919 | | | |
| Policy and Mortgage stamps in hand | 243 | | | |
| Cash at the Bank of England | 18,798 | | | |
| Cash at the London and Westminster Bank | 2,000 | | | |
| Various sums due to the Society before 1st July, 1865 | | 2,860,052 | 0 | 0 |
| The present value of £5,699, being the amount of annual premiums on assurances not as Members | | 69,564 | 0 | 0 |
| The present value of such part of the annual premiums amounting to £95,606 on the lives of Members (2nd series), as they will be required to pay in full | | 57,188 | 0 | 0 |
| The present value of the future reduced premiums on the lives of Members:— | | | | |
| 1st series at 85 per cent. reduction | 222,375 | | | |
| 2nd series at 75 per cent. reduction | 290,547 | | | |
| | | 512,922 | 0 | 0 |
| | £ | 3,725,207 | 0 | 0 |

The Income of the Society is as follows:—

| | |
|--|-----------------|
| £190,000 3 per cent. Stock, producing yearly | £5,700 |
| 10,000 Bank Stock | 1,125 |
| 111,500 Liverpool Corporation bonds | 4,460 |
| 2,525,405 advanced on Mortgage and Policies | 113,611 |
| | <u>£124,896</u> |

| | | | |
|---|----------|---|----|
| Gross amount of annual premiums on 5,642 existing Policies (30 June 1865) | £249,228 | 5 | 10 |
|---|----------|---|----|

CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.

Established 1824.

EIGHTH DIVISION OF PROFITS.

REPORT OF THE DIRECTORS.

IN conformity with the provisions of the Deed of Constitution and of the Society's Special Act of Parliament, the Directors have called the present Meeting, in order to lay before the Proprietors and the Assured a statement of the transactions of the Society during the Quinquennial period which terminated on the 30th June 1866, and the result of an Investigation into its financial position at the same date.

The period under review embraces the years from the 38th to the 42nd inclusive of the Society's existence,—a portion of that period of full maturity during which the soundness of the basis on which an Assurance Society rests is put to the severest test. The results to be reported, derive, therefore, additional weight from this consideration.

To the successful progress of the Society during this period, the following facts bear ample testimony:

The new Assurances, which were purely English, were for a total sum of **£1,518,181**, producing Premiums amounting to **£50,497** annually, of which sums the former exceeds by **£31,811**, and the latter by **£2,392**, the corresponding items of the previous five years, although these constituted the largest amount of new business transacted in any like period.

The Income, notwithstanding a reduction in the Premiums in lieu of Bonus additions of over **£5,600** per annum, rose from **£195,400** on the 30th June 1861, to **£215,237** on the 30th June 1866, being an increase of nearly **£20,000** per annum.

The Assurance Fund, which in 1861 was **£1,422,191**, reached **£1,619,539** in 1866, showing an increase, after payment of **£85,303** on account of Bonus at the last Division, of **£197,348**.

The Interest yielded during the whole period on all the Society's property, invested and uninvested, was on the average **£4. 1s. 9d.** per Cent., being somewhat in excess of that realized during the previous five years. The property invested yielded, on the 30th June 1866, **£4. 4s.** per Cent., a rate of Interest that will be deemed highly satisfactory when the unimpeachable character of the Securities is taken into account.

On the other hand, the mortality experienced during the five years has not been altogether so favourable as in the previous period. The Claims that accrued were under 856 Policies, amounting to **£643,885**, as against 700 Policies, for **£464,280**, in the previous five years, making the total Claims from the commencement **£2,265,763**. It is not, however, either in the number or the aggregate amount of these Claims that their unfavourable character is to be found, but in the circumstance that an unusual proportion of them fell upon Policies for large sums and of less than average duration. In stating this, the Directors believe themselves to be recording the common experience of the larger Assurance Institutions during the same period.

Passing now to the actual financial position of the Society on the 30th June, it may be stated that the Policies in force on that day were 8,331 in number, assuring, with their Bonus additions, the sum of **£5,096,351**; and these Policies have now to be dealt with.

It will be seen on reference to the annexed statement of Assets and Liabilities, that, after deducting the Proprietors' Capital of **£50,000**,

| | £ | s. | d. |
|---|-----------------|-----------|----------|
| The Assets on the 30th June last were . | 1,619,539 | 14 | 8 |
| And the Liabilities to the same date . | 1,343,708 | 19 | 2 |
| Leaving a Surplus of | <u>£275,830</u> | <u>15</u> | <u>6</u> |

Deducting from this Surplus the sum of **£50,000** required by the Society's Special Act of Parliament to be set aside as a permanent reserve fund, there remains available for Division the sum of **£225,830. 15s. 6d.**, of which the Directors recommend the distribution of **£225,000**, being the nearest amount convenient for that purpose.

This sum, though less by £12,000 than that divided in 1862, exceeds by £30,000 the corresponding amount in 1857; and is fully 22 per Cent. of the total receipts from all sources during the five years—or considerably more than a whole year's Income.

It may not be uninteresting to add that the proportion of profit to income here indicated obtains almost exactly when the comparison is extended to the entire period of the Society's existence. To the 30th June last, the whole receipts from the commencement in 1824 were £4,722,730, whilst the actual profit to the same date was £1,012,830, or 21·5 per Cent. of such total Income.

Though the statement may be needless, the Directors think it well to record that in determining the liabilities the exact methods previously adopted have been rigorously adhered to. As on former occasions, the Carlisle Rate of Mortality, with 3 per cent. interest, has been employed, and none but the net premiums having been taken into account, every encroachment on, or anticipation of, future profits has been scrupulously avoided. The sum to be divided is, therefore, emphatically *realized profit*, which, fairly earned, is rightly divided.

Of the sum to be apportioned, it is known that one-sixth, or £37,500, falls to the Proprietors. The remaining five-sixths, or £187,500, fall to the assured, yielding a Reversionary Addition to the Policies of £272,682, in which sum every Policy on the participating scale of Premium, existing on the 30th June last, will share in proportion to its contributions to the funds of the Society since the last division.

This Reversionary Bonus will average nearly 45 per Cent., or vary, with the different ages, from 32 to 85 per Cent. on the Premiums received in the Quinquennial period on all the Policies among which it will be distributed, whilst its equivalent value in Cash will average over 26 per Cent. of the like payments.

The high per centage again exhibited by the Cash Bonus induces the Directors to draw more marked attention than they have hitherto done to its real character and benefit. Of every £100 paid as premiums by a participating Policyholder, £20 is a marginal addition to the net or mathematical premium of £80 required for the actual risk, and is added, partly for expenses and undetermined fluctuations, and partly for the privilege of sharing in the general profits of the office. A return in cash, such as is now offered, averaging £26 for every £100 so paid as premiums, not only refunds to the assured the whole of such marginal addition, but leaves to be received by him a further sum of £6 as his share of profits that have virtually cost him nothing.

The last statement the Directors think it necessary to make has reference to the number of Policyholders who, retaining all their present right of sharing in future profits, may now relieve themselves of any further payment on account of premiums, by the surrender in whole or in part of the Bonus additions to their policies. This number is 350; in 1862 it was 176. It would have been larger on this occasion by 194, had not some portion of the Bonuses on these Policies been taken in Cash or been otherwise appropriated.

*ASSETS and LIABILITIES on 30th June, 1866.***ASSETS.**

| | £ | s. | d. |
|--|------------------|-----------|----------|
| Funded property, viz., £255,000 Stock | 234,170 | 11 | 0 |
| Mortgages | 1,185,097 | 12 | 4 |
| Advances on Life Interests | 134,398 | 0 | 0 |
| Freehold House for the Society's Offices | 12,750 | 0 | 0 |
| Value of Bonuses on Policies belonging to the Society at other Offices | 14,130 | 11 | 4 |
| Premiums, Dividends on Stock, and proportion of Interest due | 45,162 | 6 | 3 |
| Agents' Quarterly Balances | 15,668 | 8 | 6 |
| Balance at London and Westminster Bank:— | | | |
| Deposit Account | 15,000 | 0 | 0 |
| Drawing Account | 12,937 | 7 | 2 |
| Cash in the Office | 224 | 18 | 1 |
| Total Assets | 1,669,539 | 14 | 8 |
| Deduct Proprietors' Guarantee Fund | 50,000 | 0 | 0 |
| Consolidated or Assurance Fund | 1,619,539 | 14 | 8 |

LIABILITIES.

| | £ | s. | d. |
|--|------------------------|------------------|-----------------|
| Value of Policies effected on the Participating Scale | 998,102 | 7 | 0 |
| Value of existing Bonuses | 225,353 | 5 | 0 |
| Value of Policies effected on the Non-participating Scale | 61,738 | 6 | 4 |
| Value of Annuities | 733 | 17 | 0 |
| Dividends due | 2,562 | 10 | 0 |
| Claims by Deaths which occurred before 30th June, 1866, unpaid: | 53,199 | 18 | 0 |
| Due for Rates, Income Tax, Commission, and sundry Expenses | 2,018 | 15 | 10 |
| | <u>1,343,708</u> | <u>19</u> | <u>2</u> |
| Surplus | 275,830 | 15 | 6 |
| Deduct Reserve Fund, pursuant to section 32 of the Society's special Act of Parliament | 50,000 | 0 | 0 |
| Available for Division | <u>£225,830</u> | <u>15</u> | <u>6</u> |

LEGAL AND GENERAL LIFE ASSURANCE SOCIETY.*Established 1836.***REPORT OF THE DIRECTORS.**

THIS MEETING, called in pursuance of the provisions of the Deed of Settlement for the purpose of declaring the amount of Profit to be set apart out of the Assurance Fund in respect of the period of Five years ending with the 31st December, 1866, is the first held under the new system of distribution of the Profits of the Society.

The following is the result of a careful valuation of the Assurance Fund, made as a basis for such Declaration; viz.—

| | £. | s. | d. |
|---|-----------|----|----|
| Value of Assets at 31st December 1866 | 1,382,843 | — | — |
| Value of Liabilities at same date | 1,203,990 | — | — |
| Excess of Assets | 178,853 | — | — |
| Deduct for Reserve | 8,853 | — | — |
| Divisible Surplus | £170,000 | — | — |

The Directors recommend that this sum of £170,000 should be divided between the Proprietors and the Assured in the proportions fixed by the present provisions of the Deed of Settlement; viz.—

To the Proprietors, **one Tenth** part, being £17,000.
And to the Assured, **nine Tenth** parts, being £153,000.

After such apportionment has been made, the respective amounts of the two Funds as on the 1st January 1867, will be—

| | £. | s. | d. |
|-----------------------------|-----------|----|----|
| Proprietors' Fund | 177,710 | 5 | 1 |
| Assurance Fund | 1,219,422 | 1 | — |

The Constitution of the Society requires that the Proprietors' Fund shall never, by the declaration of a Dividend, be diminished below £160,935. 19.

| | £. | s. | d. |
|------------------------------------|---------|----|---------------------|
| Therefore, of the sum of | 177,710 | 5 | 1 above mentioned, |
| reserving such | 160,935 | 19 | — |
| there remains | £16,774 | 6 | 1 available towards |

an increase of the Proprietors' Dividend during the current period of Five years.

This will allow an addition of 3s. 6d. to be made to the Dividend last declared of 6s. per Share per annum.

It is therefore proposed by the Directors to declare a Dividend of 9s. 6d. per Share, payable in July annually until the next declaration of Profits. The Shares remain as before, with £8 paid-up on each.

The Share of Profit allotted to the Assured (£153,000) exceeds by £17,000 the amount they would receive, if the former system of distribution were now in force. It will allow a substantial increase in the rate of Bonus on all Participating Policies over that last declared, whether taken as a Reversionary Addition to the sum assured, or as a reduction in the Premium.

This Share will be converted, as usual, into a Reversionary Bonus payable at death, and attaching at their renewal date in 1867 to all Bonus Policies which shall then have endured for Five full years, and at the date on which they complete such Five years in all other cases.

A Prospective Annual Bonus at the same rate, and equally provided out of the Profits now realised, will, in addition, be assigned to all Bonus Policies becoming Claims by death after not less than Five years duration before the next division of Profits takes effect. This regulation secures to

every Policy entitled to participate in the Profits a full Bonus for each complete year it may have been in force when the Life Assured fails.

The date at which this Declaration is made renders it impossible to announce at present, in detail, the exact addition to be made to each individual Policy. This will be done, by letter, as early as practicable. The following Table will, however, enable each Policy-Holder to anticipate very closely the result in his own case. It should be borne in mind, in using the Table, that a Bonus at the same rate is given upon the amount of all previous Bonus remaining attached to the Policy.

SPECIMENS of REVERSIONARY BONUS added to Policies at the Fifth Division of Profits (1866) in respect of each £1,000 assured, an equal Rate of Addition being given upon all previous Bonus continuing attached to Policies:—

| Age at Admission. | Annual Premium for £1,000 Assured. | Vested Reversionary Bonus in respect of Five Years complete. | Prospective Annual Bonus until next Division of Profits. |
|-------------------|------------------------------------|--|--|
| | £. s. d. | £. s. d. | £. s. d. |
| 20 | 20 3 4 | 52 10 — | 10 10 — |
| 25 | 22 10 10 | 55 — — | 11 — — |
| 30 | 25 7 6 | 57 10 — | 11 10 — |
| 35 | 28 15 10 | 60 — — | 12 — — |
| 40 | 32 19 2 | 67 10 — | 13 10 — |
| 45 | 38 5 10 | 72 10 — | 14 10 — |
| 50 | 45 7 6 | 72 10 — | 14 10 — |

At the option of the Assured the Reversionary Bonus may, when vested, either (1st) be surrendered for its then present value in cash, or, (2ndly) together with the Annual Prospective Bonus, be applied in reduction of the full Annual Premium for the term of years until the next Division of Profits. At the last Division such reduction, where available for the full term of Five years, was at the rate of 25 per cent. upon the Premium. The Directors are happy in announcing that the present Bonus will allow 27½ per cent. in similar cases.

It remains to state the principles upon which the valuation has been conducted. First, then, the duration of the Lives assured has been estimated by the Table of Mortality in use by the Office for thirty years past, and which indicates at every age a mortality One-fifth greater than that indicated by the well-known and widely-adopted "Carlisle Table." Secondly, The rate of Interest for Money has been taken at 3 per cent. per annum. Thirdly, The Net Premiums alone have been brought into account, to the exclusion of the Charges for Agency and Expenses contained in the Gross Premiums actually receivable.

The result of thus valuing separately each of 3,082 Policies, assuring an aggregate amount (inclusive of Bonus) of £3,911,728, shows a present liability in respect of these Policies of £1,087,920.

The Assets available against this liability have been estimated at their net market value on the 31st December 1866.

CROWN LIFE ASSURANCE COMPANY.

Established 1825.

QUINQUENNIAL REPORT, 1865.

At an Extraordinary General Court, held on the 27th August 1858, it was resolved that the Profits of the Company should be divided quinquennially, instead of septennially, from and after the year 1860, when the fifth septennial division of the Profits was made.

In accordance with that Resolution, the Profits realized during the five years which ended on the 25th March 1865, have now to be divided, and the Directors have much pleasure in reporting to the Proprietors and the Assured the result of the investigation of the Company's affairs as they stood on the 25th March last.

As to the Progress of the Business.

During the last five years the Company has issued **2,359 Policies**, assuring the sum of **£1,225,643**. A comparison of these figures, with the new business of the immediately preceding septennial period, shows an *Annual increase*, in the last five years, of 124 in the number of the Policies, and of £61,368 in the sum assured.

As to the Mortality—Actual and Expected.

The claims during the five years have accrued under 527 Policies, assuring the capital sum of £319,616. Of these claims, the Policies that were entitled to share in the Profits assured the capital sum of £252,134, and the Bonuses paid thereon amounted to £50,820. The *average* Bonus paid in the period was therefore rather more than 20 per cent. on the sum assured.

The *expected* claims, during the five years, have been carefully calculated according to the "Equitable" Experience Mortality Table, from which the Company's premiums are deducted; and the result very nearly agrees with the actual mortality in the period. The *expected* number of claims was 523; the *actual* number 527. The *expected* amount of the claims was £331,599; the *actual* amount £319,616. The actual mortality was, therefore, at the rate of nearly 1,008 deaths for each 1,000 expected; and the actual amount of the claims, at the rate of £964 for each £1,000 expected.

The amount of claims in the period has not been larger than was expected, but more than the usual proportion of deaths has fallen on Policies of recent date for large amounts; and, consequently, the profits of the period have been reduced below the rate that would have been realized if the ordinary average had obtained. Such casualties are to be expected in the experience of every office; and the change to *quinquennial* divisions, while it secures to the Assured more frequent additions to their Policies, will probably cause greater fluctuations in the rate of profit to be periodically divided, than existed when the Bonuses were allotted septennially.

As to the Investments.

The average rate of interest realized on the whole of the Investments was, on the 25th March last, **£4 : 9 : 6** per cent. per annum.

As to the Position of the Company.

The total **Policies in force**, on the 25th March 1865, were **5,338**, assuring the capital sum of **£3,006,242**.

The total **Annual Income**, on the 25th March last, was, from Premiums **£94,389**; from Interest **£45,107**; together **£139,496**.

The total **Net Funds**, on the 25th March last, comprising the Assurance Fund and the Proprietors' Guarantee Fund, amounted to **£1,014,125**.

As to the Principles of the Valuation.

The Table of Mortality, employed in all the Valuations on this occasion, is the same as was used at the five preceding septennial investigations, namely—the “Equitable” Experience Table.

The *net* rate of interest realized from the investment of the Assurance Fund, during the last five years, has averaged about $4\frac{1}{4}$ per cent., but the rate of interest assumed in the valuation of the Policies of Assurance is only $3\frac{1}{2}$ per cent.; so that whatever interest may hereafter be realized beyond $3\frac{1}{2}$ per cent. will go to increase the Profits to be apportioned at future divisions.

The rate of interest assumed in valuing the Annuity transactions and the Reversionary Bonuses on Policies is 4 per cent.

In estimating the liability under the Policies, the whole of the *Loading*, amounting on the existing Assurances to **£21,240 per annum**, has been thrown off; and credit has therefore been taken in the account for only the present value of the future *pure* or net premiums, so that none of the profits to be hereafter realized have been anticipated.

It is upon these data that each Policy has been valued separately; and the results have been carefully checked.

STATEMENT OF THE AFFAIRS OF THE COMPANY.

Showing the Amount of Assets and Liabilities, and the Amount of the Surplus Fund for Division, as at the 25th March, 1865.

| ASSETS. | | £ | s. | d. |
|---|---------|--------------|----|----|
| I. FUNDS IN EXPECTATION— | | | | |
| Present value of <i>Re-assurances</i> for £137,300 | | 14,638 | 9 | 3 |
| Interest on Claims not due, from 25th March, to dates when payable | | 140 | 11 | 1 |
| | | £14,779 0 4 | | |
| II. FUNDS IN POSSESSION— | | | | |
| Government Securities | £64,688 | 5 | 5 | |
| Mortgages | 373,416 | 4 | 9 | |
| Railway Debentures | 250,912 | 10 | 0 | |
| London Water Companies' Debentures | 30,385 | 7 | 6 | |
| Dock Companies' Debentures | 50,000 | 0 | 0 | |
| Loans on the Company's Policies (within their Surrender Value) | 38,622 | 9 | 1 | |
| London and Agency Premises | 9,256 | 11 | 11 | |
| Interest due and accrued to the 25th March | 10,069 | 12 | 11 | |
| Premiums, due at Head Office and in Agencies, the time for payment of which has not expired | 22,854 | 14 | 3 | |
| Bills receivable and Policy Stamps in hand | 933 | 15 | 8 | |
| Cash at Bankers, Current and Deposit Accounts | 6,760 | 12 | 5 | |
| | | 857,900 3 11 | | |
| | | £872,679 4 3 | | |

LIABILITIES.

| I. IN EXPECTATION— | £ | s. | d. |
|---|-----------------|---------------|-------------|
| Present Value of the Company's Policies, assuring the capital sum of £3,006,242 : 12 : 0 | 620,885 | 18 | 0 |
| Present Value of £208,903 Bonuses declared at former Divisions, now remaining | 123,988 | 12 | 0 |
| Present Value of £819 : 10 : 2, future annual reductions of Premiums for Life | 7,077 | 11 | 1 |
| Present Value of £2,161 : 4 : 9 Annuities now payable | 16,871 | 4 | 0 |
| Present Value of £1,136 Deferred and Contingent Survivorship Annuities | 1,028 | 6 | 0 |
| | <u>769,851</u> | <u>11</u> | <u>1</u> |
| II. IMMEDIATE— | | | |
| Amount of Claims admitted, but not due till after 25th March | £22,204 | 10 | 0 |
| Premiums and Interest paid, but not due till after 25th March | 532 | 7 | 9 |
| Annuities due, but not paid till after 25th March | 229 | 12 | 10 |
| | | <u>22,966</u> | <u>10 7</u> |
| Total value of the Liabilities | £792,818 | 1 | 8 |
| BALANCE, being the amount of the Surplus Fund for Division, realized in the Five Years which ended on 25th March 1865 | 79,861 | 2 | 7 |
| | <u>£872,679</u> | <u>4</u> | <u>3</u> |

As to the Distribution of the Surplus Fund.

| | | | |
|---|----------------|----------|----------|
| The total Cash Surplus for Division is shown by the preceding statement to be | £79,861 | 2 | 7 |
| Of which, in accordance with the provisions in the Deed of Settlement, there have to be applied in augmentation of the Proprietors' Guarantee Fund, which constitutes a permanent security to the Assured, One-third of the surplus applicable to Policies issued before 25th March 1860 | £21,887 | 12 | 0 |
| One-sixth of the surplus applicable to Policies issued after 25th March 1860 | £2,366 | 8 | 0 |
| Together | <u>£24,254</u> | <u>0</u> | <u>0</u> |
| Leaving the Cash Surplus to be apportioned among the Assured whose Policies were in existence on the 25th March 1865 | <u>£55,607</u> | <u>2</u> | <u>7</u> |
| And which sum will be apportioned in the following manner, namely:— | | | |
| Among the Assured, under 3,040 Policies for £1,808,479, dated before the 25th March 1860 | £43,775 | 2 | 7 |
| Among the Assured, under 1,738 Policies for £802,220, dated after the 25th March 1860 | £11,832 | 0 | 0 |
| Sum as before | <u>£55,607</u> | <u>2</u> | <u>7</u> |

The sum of £24,254 now to be added to the Guarantee Fund, and the sum of £1,117, being the Proprietors' share of the Intermediate Bonus accrued in the last five years, making together the sum of £25,371, will enable the Directors to declare a Bonus of £4 : 2 : 0 on each Share, retaining a balance of £115 unappropriated. The fund, which in 1860 consisted of 6,160 Shares at £26 : 10 : 0, and amounted to £163,240, will, after the apportionment, consist of 6,160 Shares at £30 : 12 : 0, and amount to £188,496.

The sum of £55,607 now to be apportioned among the Assured, represents Reversionary Bonuses amounting to £111,076, and the sums assured by the Participating Policies in force on the 25th March last, have accordingly been increased to that extent.

The Bonuses allotted to the individual Policies vary in amount according to the respective ages of the Assured and the duration of their Policies, and the usual Certificate, informing each Policy-holder of the amount of the Bonus that has been added to his Policy, will be prepared and forwarded as soon as possible.

Regulations as to the Application of the Bonus.

The Bonuses allotted to Policies of more than two years' standing on the 25th March 1865, are *immediately vested*; and in the case of Policies on which 3 years' premiums were not paid at that date, the Bonuses will become vested when the third year's premium shall have been paid.

In the event of any Policies, on which not less than three years' premiums were paid before the date of death, having become claims since the 25th March 1865, the Bonus now declared on such Policies will be paid to the representatives of the Assured.

The Assured have the option of applying the Bonuses to augment the sum in their Policies; or they may receive the value of their vested Bonuses in cash, or apply it towards the reduction of their annual premiums, for life, or for a fixed number of years until the next division of profits, which will be in the year 1870. A Table, showing the values of the Bonuses, at the various ages, if dealt with in any of these ways, will be printed on the Bonus Certificates which will be sent to the Policy-holders.

As to Policies, dated before 25th March 1860, which receive Two-thirds of the Profits.

The practice of the Company for the first thirty-five years of its existence, that is from the year 1825 to 1860, was to divide among the Assured *Two-thirds* only of the ascertained surplus at the end of every *Seventh* year. The Participating Policies that were issued before the 25th March 1860, therefore, received at each Septennial Division, during their existence, two-thirds of the entire profits arising from all classes of the business. And, accordingly, those Policies have received at this the first Quinquennial Division (and will receive at the future divisions which they may survive) two-thirds of the entire profits realized from all classes of the Policies dated before the 25th March 1860. With a view to afford to the Assured the means of comparing the results of the two last divisions, a careful calculation has been made by the Actuary, by which it has been ascertained that the sum required to provide a Bonus now, at the same rate per cent. per annum as was declared at the last Septennial Division in

1860, is £50,560; whereas the two-thirds allotted at this Quinquennial Division, as has been already stated, amount to only £43,775. This apparent falling off in the amount of the present divisible fund, has not, however, been caused by the Company having made less profit in the quinquennial period than formerly; but is owing to the new regulations that have come into operation since the year 1860, and have conferred advantages on the whole body of the Assured (1) by giving to all who die in the interval between the periodical divisions, a share of the accruing profits proportioned to the number of premiums paid since the immediately preceding division; and (2) by giving Bonuses to the larger number of the Assured who survive the *fifth* year, instead of, as formerly, postponing the division till the end of the *seventh* year, and then dividing the larger accumulated profit among the smaller number of survivors. Those changes have affected the fund at this Quinquennial Division in the following manner:—

| | | | |
|---|--------|---|---|
| 1. The Intermediate Bonuses that have been paid on the Policies which have become claims in the last five years (such Bonuses not having been paid in former periods) amount to | £2,616 | 0 | 0 |
| 2. The Quinquennial Fund of £43,775 having been divided <i>two years earlier</i> than at former divisions, the Assured thus gain the interest on the Fund for these two years, which, reckoned at only 4 per cent. (though the Company would have realised £4 : 7 : 0 per cent.,) amounts to | 3,572 | 0 | 0 |
| 3. The Policies which, if the Division were postponed till the end of the seventh year, as formerly, would lapse by death in the next two years, and thus <i>have no claim for Bonus on the Septennial Fund</i> , amount to £106,000, on which sum, however, the <i>five years' cash profit</i> has now been allotted, and amounts to | 2,773 | 0 | 0 |
| <hr/> | | | |
| These three sums amount to | £8,961 | 0 | 0 |
| <hr/> | | | |

and in order that a correct comparison may be made of the results of the two last periods, that amount should be added to the Quinquennial Fund.

| | | | |
|--|---------|---|---|
| We have, therefore, the Fund actually divided at the end of the fifth year | £43,775 | 0 | 0 |
| And the sums paid out of, or deducted from, the five years' profits as already shown | 8,961 | 0 | 0 |
| <hr/> | | | |

| | | | |
|--|---------|---|---|
| Making the total sum, or value, received at this division in 1865, by the Assured whose Policies were in force in 1860 | £52,736 | 0 | 0 |
| <hr/> | | | |

So that the Profits of the Company with respect to those Policies have been £2,176 *more* in the five years to 1865, than the sum divided, on an equal amount Assured by Policies of like duration, at the last Division in 1860.

As to Policies, dated after 25th March 1860, which receive Five-sixths of the Profits.

It was resolved that all Assurers who effected Policies in the Participating Class, after the 25th March 1860, should receive *five-sixths* of the entire profits to arise from all classes of the Assurances completed after that date. Of the Assured who have joined the Company since the 25th March, 1860, there are 1,738 whose Policies are in the Participation Class, and were in force on the 25th March 1865, and who accordingly shared in the Profits at this Division for the first time. The Bonuses which have been allotted to their Policies are stated in the following Table; and, for comparison, the Bonuses that were declared on Policies of like duration and amount at the last Division in 1860 are also stated:—

TABLE OF BONUS ADDITIONS

To Policies effected since the date of the last Division of Profits on the 25th March 1860.

| Policies effected before 25th March | Number of Premiums paid. | Sum Assured. | Bonus, 1865. | Bonus, 1860 |
|-------------------------------------|--------------------------|--------------|--------------|-------------|
| 1861 | 5 | £1000 | £68 | £60 |
| 1862 | 4 | £1000 | £54 | £48 |
| 1863 | 3 | £1000 | £41 | £36 |
| 1864 | 2 | £1000 | £27 | £24 |
| 1865 | 1 | £1000 | £14 | £12 |

The Bonuses allotted at this Division, to Policies which have been effected in the last five years, are therefore 13 per cent. *larger* than the Bonuses allotted, at the last Division in 1860, to Policies of equal duration and amount.

PRACTICAL QUESTIONS.

SUGGESTIONS have been made at various times that the usefulness and interest of this *Journal* might be much increased if greater prominence were given to questions of a practical character; and it has been suggested in particular, that solutions might with advantage be inserted of some of the more difficult cases that come before actuaries in the course of their practice. We are therefore induced to give the particulars of the two following cases, with the approximate solutions which appeared sufficiently accurate to the actuary to whom the questions were submitted. We shall be glad if such of our readers as may have leisure will give more exact solutions; and we shall also be glad to receive other approximate solutions from persons who may consider the following unsatisfactory.